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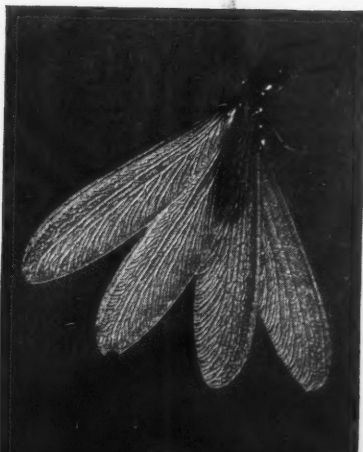
SOIL CONSERVATION

CONSUMERS' GUIDE

APRIL 15, 1940



QUALITY FACTS



TERMITES



WASHING MACHINES



FOOD SUPPLIES

CONSUMERS' GUIDE

APRIL 15, 1940 VOLUME VI, NUMBER 14

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PRICE AND QUALITY, most people assume, are passengers on the same elevator. When price goes up, the assumption runs, quality goes up, too. If quality goes down, then price is supposed to go down with it.

Out in Ohio, some investigators recently looked into the relationship between the price and quality of the canned tomatoes and corn packed and sold within the State. This study, undertaken at the suggestion of the Ohio Canners Association and partly financed by it, was carried through by the Ohio State University and the State Agricultural Experiment Station.

About 200 grocery stores, chain and independent, in 3 cities, Cincinnati, Cleveland, and Columbus, were visited. Investigators bought 43 different brands of corn packed by 23 Ohio canners, 65 cans in all. Their tomato purchases, 65 cans, came in 35 different brands and were packed by 25 canners. For both corn and tomatoes they bought cans of only one size, No. 2.

ALL CANS WERE TURNED OVER TO OFFICIAL graders of the U. S. Department of Agriculture. The price for the No. 2 cans of tomatoes the investigators bought ranged from a low of 5.5 cents a can to a high of 14 cents, with the average for all 65 cans coming to 8.25 cents. One of the cans of tomatoes turned out not to be tomatoes at all, but tomato juice. However, for the 64 remaining cans the average quality score was 76.2. (U. S. Grade A refers to corn and tomatoes scoring from 90 to 100; Grade B to scores from 75 to 89; and Grade C to scores above 60.) One can of tomatoes which sold at the lowest price scored 76, or 37th in the 64 cans. The tomatoes in this 5.5 cent can were of higher quality than those in other cans which sold for 12 cents, 10 cents, and 8 cents.

Highest priced can of tomatoes, which sold for 14 cents, had a quality score of 91 which put it 6th on the list. It ranked below 3 cans of tomatoes which sold for 6.25

cents, and 2 others which sold for 10 cents.

Cans of corn were for sale at prices which ranged from 5.5 cents to 15 cents a can, with the average striking 8.43 cents. The average quality score for the 65 cans of corn was 75.4.

The best scoring can of corn, 95, sold for 7.5 cents a can, with the highest priced can (15 cents) scoring second with 94. On the other hand the lowest priced can of corn (5.5 cents) ranked 25th in quality among the 65 cans of corn with 77. Below it in quality there were cans of corn which sold for 7.5 cents, 8.33 cents, 10 cents, and 12.5 cents.

Seven cans of tomatoes all of which were sold under the same brand name were examined by Federal graders. Although these tomatoes were packed under the same brand, quality ranged from 60 to 85 with an average quality of 74.9.

NEXT THE INVESTIGATORS TURNED THEIR attention to the adjectives on the labels to see how closely they described what was in the can.

"Of 64 tomato samples," the report reads, "19 cans bore on the labels such claims as 'Fancy,' 'Selected Hand Packed,' 'Best Buy,' 'Quality Supreme,' 'High Quality—Pure Food,' 'Distinctively Different,' and 'Extra Hand Packed—Rich in Vitamins.' The quality of these 19 samples averaged 76.8. The quality scores of the 45 samples bearing no such claims averaged 75.9, or so nearly the same as to represent no significant difference."

The contents of the cans of corn looked into showed similarly that adjectives had nothing to do with tested quality.

One can of tomatoes (not typical) indeed satirized the entire problem. The label on this can read: "This can is packed entirely by hand with tomatoes solid from bottom to top. Prepared from fully ripe fine flavored Ohio-grown tomatoes. Eat them raw or cooked. You will find this can of good tomatoes is worth twice as much as a poor one." When opened the can revealed tomato juice—not tomatoes, and no tomato solids.

Consumers, contemplating such findings, might gather that the compass points they ordinarily rely on when they go shopping steer them nowhere.

"When the goods (a consumer buys) are enclosed in cans that are sealed, rigid and opaque, her uncertainty about the utility of the contents is even further increased. As a consequence she has come to rely upon the price as a buying guide," comments the report on the investigation.

"But we have seen that price alone merits no confidence . . . We have observed also that brand names frequently cannot be depended upon . . . Moreover, personal familiarity with the actual quality of competing goods is out of the question for the average consumer . . .

"Therefore, the conclusion is inevitable that some other more dependable means must be adopted to indicate quality to a buyer if she is to buy intelligently and avoid wasteful and uneconomic expenditures . . .

"A reliable statement of quality and other pertinent factors on every label would satisfy these requirements.

"FULLY INFORMATIVE LABELING," THE conclusions go on to say, "holds promise of real benefits to sellers as well as to buyers . . . Transactions would be more equitable. Business relationships would be improved. Efficiency would be encouraged through the payment of premiums in the form of higher prices for higher quality and imposition of penalties in the form of lower prices for lower quality. Discouragement and losses and litigation caused by unfair competition would be reduced. All transactions in a given lot of merchandise would be conducted in the same language, and all parties concerned could be equally well informed about the value of the goods."

One form of labeling which meets the specifications outlined by the Ohio State University report is the A-B-C grade labeling system which the Department of Agriculture offers to canners and packers.

A description of the A-B-C grading system was printed in the March 1, 1940 issue of the *Consumers' Guide*.

Incidentally, the Ohio report was issued by the Department of Rural Economics, Ohio State University, Columbus, Ohio, as Mimeographed Bulletin No. 123.

Our thanks to the Farm Security Administration for the photographs on pages 4 and 5.

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MARCH 21, 1935, New Yorkers woke up to see 300 million tons of opaque dust in the air, 6 million carloads of Kansas, South Dakota, Oklahoma, and Texas farms. Congress, in 1935, passed the Soil Conservation Act, launching a national attack on the soil erosion behind such damaging dust storms.

Without the topsoil there could be little agriculture, few livestock, few forests, few birds (except those in flight across a searing desert), few streams and rivers (except for occasional floods which would disappear as suddenly as they appeared after a storm), and little, if any, game.

Now there are facts which are interesting, but inconsequential, that lead to nothing (there are about 206 bones in the human body). Then there are facts which are interesting and consequential, which should lead to action.

People are inclined to regard warnings about soil exhaustion and erosion the way they do warnings to the effect that in 100,000 years there won't be any coal left.

SOIL EROSION IS A HERE-AND-NOW PROBLEM. Already you might say the United States has lost a State, where once there were 48 of them, there are now only 47 left. Fifty million acres of former cropland, an area the size of Nebraska, has been ruined for any further cultivation by erosion.

Take one away from 47 and there are 46, that is, another 50 million acre stretch of land which was formerly rich farmland is on the edge of uselessness. The people now on it, who try to scratch out a living, work in poverty and the harder they try to till such land, the swifter its ruin and the deeper down they drag their families.

That makes 46 States, but on 100 million more acres of cropland from half to all of the topsoil has been washed away. Over these 100 million acres of land, the equivalent of 2 States the size of Nebraska, destruction is moving so fast that within 10 to 50 years unless quick effective action is taken there will be nothing but wasteland.



APRIL 15, 1940



Look to the Soil

When dust rides the winds, and mud chokes the streams, and the fertility of the earth becomes exhausted, there's danger ahead for everyone. Now there is a program to battle with soil losses. This is the first of four articles that tell how the program works

NINEVEH, whence came the quinquiremes, was built on a shelf between 7 and 9 inches thick.

Now a shelf that thick may for a time support a city if it doesn't wear thin, if it is shored up and braced, and if the timbers supporting it don't rot or fall away.

But if you pay too much attention to commerce in ivory, apes, and ebony, and too little to the tremors that pass through the land, after a while the shelf gives way, the city on it slides off into dust and there are lizard covered red rocks, yellow sands, and hot desert winds where the city flourished.

The shelf beneath Nineveh did give way, and today archaeologists and their battalions of laborers must dig through 30 feet of sand if they want to see the bazaars where once there was traffic in porphyry and peacocks.

This America of ours, too, was built on a shelf 7 to 9 inches thick. The cities, the skyscrapers, the railroads, the battleships,

the Washington Monument, the subway, and the elevated, the Golden Gate Bridge, Boulder Dam, the Lincoln Memorial, the cathedrals of learning, and the cinema palaces, the whole United States—from Canada to the Rio Grande, from Maine to California—all of it, was built on a shelf which was on the average, no thicker than 9 inches.

COMMONLY THIS FLOOR, THE THICKNESS of a layer cake, which supports upwards of 130 million people is called topsoil. Already, however, precious inches of it have been lost. On the average, only 5 to 6 inches of it are left. Over thousands of acres, all of it has been peeled off by rain and wind. Without the remaining 7 inches of topsoil which lie over the land the less fertile earth beneath these inches would be hard put indeed to produce the things so urgently needed by the 130 million people who go about their business today. Probably it could not be done.

Erosion has just begun to tear at the soil on another 100 million acres of cropland. That makes 6 States, either lost, or in hazard. This means for the country as a whole, and considering all types of land erosion has ruined or seriously impoverished, about 282 million acres. From an additional 775 million acres, it has stripped away from one-fourth to three-fourths of the fertile topsoil.

Invasion, as deadly in its ultimate effect as war, then, has attacked or is threatening half of the 2 billion acres which constitute the United States.

The social effects of worn-out, cut-away, flayed land are those of a slow-motion disaster. The impact of a fire, a flood, an earthquake, jolts the world and awakens the sympathies of millions of people to the needs of the stricken.

When the farms in a rural county slowly lose their fertility, however, and the farm families one by one lose their farms and drift away, the decay of the farm community unfolds over 10, 20, 30, and 40 years. Not until the land is lost, and the glacial economic and social consequences have completed their damage is the damage itself public knowledge.

ON MAY 11, 1934, NEW YORKERS AWAKENED, as Chicagoans had the day before, in a weird yellow atmosphere. A thin film of dust filtered onto window sills, over table tops, onto floors. The air was dry, and faintly irritating. One man said that breathing the air was like working "at the tail end of a straw stacker in the loft of a barn."

That was the first dust storm which blew East. New Yorkers had to read their papers to find out what had happened, though Southerners and Westerners in the city knew immediately what it was in a general way.

They did not know that it was 300 million tons of topsoil gathered up from farm surfaces extending from South Dakota to Texas.

This dust storm put soil erosion in the headlines, made it a matter of general public knowledge, and gave a dose of much needed publicity to the problem of what to do about the vanishing United States.

Floods won 120 point type in the headlines when they deposited 3 inches of mud on the counters and shelves of the department stores in Pittsburgh's golden triangle. Smaller follow-up stories told of the million acres of farmland covered by scum the floods left.

IN THE TYPOGRAPHICAL TRAIL OF FLOODS and dust storms, stories of stranded families on cut-over land began to appear in the papers. Stories of migrant families.



PATRICK HENRY in a speech after the Revolution said: He is the greatest patriot, who stops the most gullies. Erosion does not stop on the land. Poor soil makes poor communities and poor people.

The Nebraska farmer who sat on his front porch to count the Kansas farms as they blew by got a small box on the front pages of most papers.

Jalopies piled high with furniture and the wondering pathetic faces of children began to appear in the sticky brown rotogravure sections of Sunday papers.

The plough that broke the plains had at last left an impression on the public mind. People began to want explanations and soil experts, foresters, meteorologists, ecologists, and botanists came forward to make them.

Floods and dust storms and migrant families which suddenly burst into the public consciousness were the end links in a chain which was forged by land use policies of 300 years, tearing away at soil which it had taken thousands of years to build.

AMERICA WAS PROMISES OF WEALTH TO THE settlers and those who succeeded them. It was a treasure land to be looted, looted honestly, looted with courage, looted with hard work, but looted nevertheless. Axes rang in forests. Ploughs gouged the virgin soil. Grass was sheared off the land. Wild animals were massacred. Birds were slaughtered. Hills were denuded of trees. The matted tangled plains were furrowed.

Patriotically intent on peopling the plains

or inhabiting the wilderness, urged on by a national policy intended to exploit the natural wealth as quickly as possible, pioneers, settlers, and then, just farmers, overthrew the slow processes of nature and installed a plan of their own.

In 10, 20, 50 years, topsoil which was 7 thousand years in the making was first laid bare and then washed away by rain, and blown away by wind. Once the soil in one region was exhausted, families moved on, for there was always more land, a continentful of inexhaustible land.

Now, each year 3 billion tons of soil are washed or blown from the fields and pastures in America. Lost with the soil are 43 million tons of phosphorous, potassium, and nitrogen, the principal ingredients of commercial fertilizer. On the basis of the amount paid by farmers for commercial fertilizers in 1934, this represents an annual loss of 10 billion dollars.

NOT EVEN SCIENCE HAS KEPT UP IN THE race with erosion. Brilliant discoveries made by scientists have shown farmers how to farm more efficiently and more productively. But so rapidly has soil fertility decreased as the result of erosion and exhaustion that the average per acre yield in the South today is less than it was in the year 1860.

The total loss to the Nation from soil abuse is incalculable. The Chief of the Soil Conservation Service, for example, points out that an adding machine cannot tabulate the dollar and cent cost of the social decay that follows on soil erosion. Much of the loss is in unmeasurable costs.

Incomes go down as soil fertility declines. Irrigated areas dependent on reservoirs must be abandoned eventually as erosion continues.

Helped on by erosion large agricultural sections become ghost regions.

Western farmers dependent upon grazing, see their land waste into desert.

Rural communities disintegrate depositing hundreds of thousands of persons on relief rolls, upsetting traditional and established patterns of community life. Erosion, of course, is only one of many causes of this. But it is an important cause.

Other unmeasurable damages occur too: The depletion of fish in streams, damage to the oyster industry, and the removal of irreplaceable plant food constituents from the soil.

THERE ARE ALSO CALCULABLE DAMAGES which can be totaled on an adding machine. The following table tells that story:

Estimated Annual Cost of Erosion

	Million dollars
Direct cost to farmers.....	400
Damage to highways.....	180
Damage to railways.....	100
Damage to reservoirs.....	30
Damage to streams and harbors.....	29
Damage to irrigation ditches.....	18
Damage to drainage ditches.....	15
Contribution of erosion to increased flood damage.....	42
Damage to wildlife.....	5
Damage within cities.....	25
Total of major items.....	844

The Peruvian Incas, who had a civilization which was also destructive of the soil, eventually, to feed themselves, were forced to work their land with an intensity which today would mean an expenditure of \$18,000 per acre. Such effort was possible only with slave labor. Today if land should be driven to such stubborn resistance by mistreatment this country would have to be abandoned.

America need not be abandoned, however, even though the Secretary of Agriculture recently noted that soil is still being lost faster than it is being restored. There is no problem of erosion anywhere in the country

which intelligent, scientifically planned, co-operatively undertaken care cannot solve.

Late, but still in time, such care is under way throughout the country. Farmers are gaining valuable experience. Experts in many Federal agencies, in State agencies, in universities, and research laboratories are working with farmers to save the soil, using the resources and knowledge of sciences which include physics, chemistry, sociology, meteorology, and that youthful science, ecology, the study of the relationships between all the forms and factors of life in a region.

The national program for soil conservation today is so important an activity that a summary of how it came into existence is worth a couple of inches on any page.

TURNING POINT IN THE CHANGEOVER FROM soil dissipation to soil conservation, one expert says, was the publication of the results of a soil survey made in Fairfield County, S. C., in 1911. This survey revealed that 90,000 acres of former farmland in the county had been so cut to pieces by gullies due to bad farming practices that they had been rendered barren. Another 46,000 acres of rich bottomland had been transformed into swampy meadowland because streams choked with erosion sediment had overflowed their channels.

A series of bulletins then followed which culminated with the issuance of a Department of Agriculture Bulletin in 1928 called "Soil Erosion, A National Menace." Alarmed by the facts in this bulletin the House of Representatives in the same year unanimously appropriated \$160,000 for the purpose of studying soil erosion.

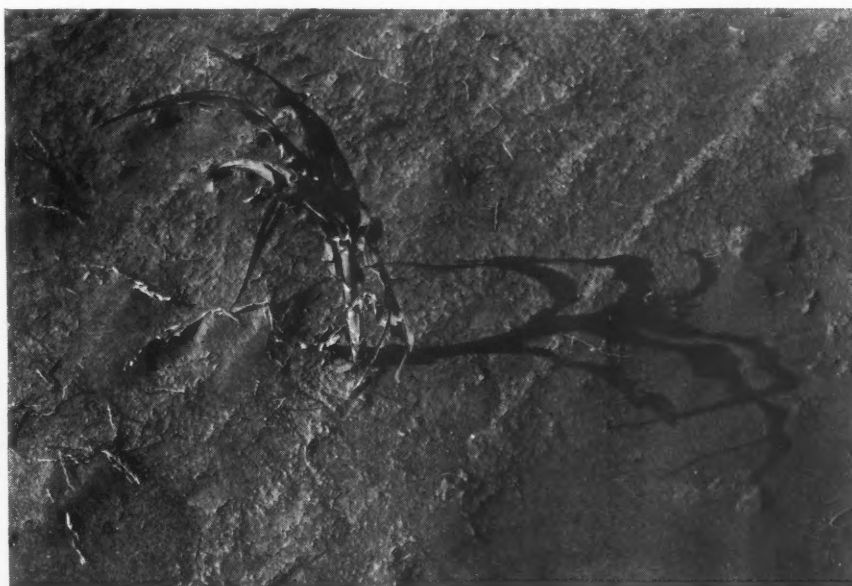
In 1929 and 1930, 10 soil conservation research or experimental stations were established throughout the country and then in 1933 the Soil Erosion Service was created under authority given in the National Industrial Recovery Act.

SOIL CONSERVATION MET A FACE TO FACE challenge just as the dust was settling over the land from the great dust storms. Then Congress in the Soil Conservation Act of 1935 declared:

"It is hereby recognized that the wastage of soil and moisture resources on farm, grazing, and forest lands, of the Nation, resulting from soil erosion, is a menace to the national welfare and that it is hereby declared to be the policy of Congress to provide permanently for the control and prevention of soil resources and thereby to preserve natural resources. . . ."

By this Act, the Soil Erosion Service was renamed the Soil Conservation Service and

CORN is one of the greatest burdens a land must bear. Row cropping (as opposed to the closely matted growth of grass and clover) exposes the naked earth to erosion by wind and water, while the ravenous corn plant eats away the life-giving nutrients in the soil. Low incomes and tenant status have frequently forced farmers, against their better judgment, to over-crop with corn. Today, new forms of farm leases and soil-conservation payments open up the way to soil-building practices.



6 established in the Department of Agriculture as a permanent agency. Through erosion control demonstration areas, by the purchase and development of submarginal agricultural land, by cooperating with soil conservation districts, by developing water facilities, by undertaking research in the use of water facilities, and by farm forestry, this agency has worked intensively on the erosion problem. This year its operations were under way on more than 200 million acres of land.

THE FEDERAL AGENCY WHICH DEALS WITH Soil Conservation most extensively today backed into the problem. The Agricultural Adjustment Administration in its inception was an action approach to what had been called the farm problem during the years after the World War. A farm problem was coming due in any event, but it was precipitated by the enormous agricultural surpluses the country continued to produce after the War. Disappearing export markets for farm products created new problems. Finally, unemployment in cities and an industrial crisis sent farm prices plunging down like a monkey wrench dropping in an elevator shaft.

Factories, when orders stop coming in, reduce expenses and close down production. Farmers, when they lost orders, were unable to do anything but go on producing. The first Agricultural Adjustment Administration which was hammered into shape after years of debates in Congress and at farmers' meetings, was intended to give farmers some of the control over production that any manufacturer has.

Once the AAA program began to work, two monumental facts emerged. First, the crops whose surpluses were the substance of farmers' nightmares, were the very crops that wore out the soil. Crop control, by diverting land from soil-destructive crops to soil-building crops, was a first step toward conservation. Second, surveys showed that crop control by itself over a period of time would have to give way to a national agricultural program based upon farseeing land use policies which reckoned with the maintenance of land as well as with its commercial exploitation.

Two other facts emerged to exonerate American farmers of the whole blame for the erosion invasion. Many farmers, it was learned, had a working knowledge of what to do to prevent soil erosion, but they did not have the working capital to put their information to work. Soil conservation required investment of money they didn't have. It required that they cut down on

cash crops when their incomes were already too low to live on.

Farm tenancy stood out as another boulder that blocked efforts to take good care of the soil. About 42 percent of American farmers are tenants on their farms. Traditional leases, however, did not encourage tenants to invest time and money in soil-conserving practices, for they did not give the tenants secure tenure. On the other hand landlords hesitated to undertake expensive measures they were not sure tenants would keep up. Soil conservation fell between the two stools.

SURVEYS WERE LAUNCHED TO EXPLORE THE possibility of combining a positive conservation policy equal to the magnitude and difficulties of the problem. Then, just as first conclusions were being drawn from these surveys, the Supreme Court declared the crop control feature of the first Agricultural Adjustment Administration Act unconstitutional. In the emergency, plans that had already been maturing were incorporated in the Soil Conservation and Domestic Allotment Act of 1936.

AAA conservation efforts take hold on practically every farm in the country. Administered by committees of farmers in the farm counties, the program has already suc-

ceeded in enlisting millions of farmers in the really decisive part of the struggle to save the soil; that is, it has already changed over the workaday farming habits of almost the entire Nation. The retreat, in a sense, has stopped, and the direction is forward from now on.







In 1939, the acreage planted to soil-depleting crops was about 23 million less than the average for the preceding 10 years. A considerable part of this land was planted to soil-building crops.

IN 1937, FARMERS DOWN AT THE GRASS roots took another step which enabled them to close with the soil-erosion problem even more thoroughly. In that year Arkansas enacted the first Soil Conservation District Law. This law—like others that have now been adopted in 37 States—enables farmers in a region to join together for cooperative action against erosion which would be impossible to undertake individually.

The account of the way the Nation has enlisted men in the fields, the forests, and the laboratories to save the soil is a fascinating one, and the fight they are waging with airplanes, pick and shovel, scientific instruments, mortar, stone, seed, and trees is as exciting as a dispatch from a war correspondent.

EROSION HAS DONE THIS to the face of America. Only in the white areas is there little or no erosion. Elsewhere wind and water have been allowed to denude or despoil land that should be our most treasured possession.



- | | | | |
|---|--|---|--|
|  | means slight wind erosion. |  | means severe sheet and gully erosion. |
|  | means moderate sheet and gully erosion. |  | means severe wind erosion. |
|  | means moderate sheet and gully erosion with slight wind erosion. |  | means mountains, mesas, canyons, and badlands. |

AT HOME in a termitarium, the termite queen lays eggs steadily while the termite king stands by. As fast as the eggs are laid, termite workers haul them away for storage to the left. Placed in strategic narrow places throughout the termite tunnels, the armor-headed soldiers stand guard.



TERMITE workers are cream-colored or whitish, soft-bodied insects which are rarely seen by householders. Termite soldiers, darker in color, have long jaws and armor-plated heads. The winged termites (below) which householders see are future kings and queens looking for a new home.

Have You Termites In Your Home?

Here's how you can banish the destructive pest, if you want to follow a few simple rules worked out by experts in the Department of Agriculture

THE GENEALOGIST who attempts to trace the ancestry of a termite has a job cut out for him, for the termite, who is junior to his 200 million year old cousin, the cockroach, has a lineage that runs back 60 million years into the lush ante-diluvian swamps of what the geologist calls the Cenozoic Age.

Termites, which aren't ants incidentally though they are sometimes mistakenly called white ants, have acquired something of a reputation as antisocial insects. The truth is, however, that far from being antisocial, the termite is the most social of beings.

Take the termite's work habits. Day and night, 24 hours a day, from the moment he's able to turn an antenna for the cause, to the

day of his death at the ripe, for an insect, old age of 5 years, the termite goes about his tasks doing public services without once turning aside for personal gain.

Termite colonies, and all termites live in colonies since the termite has no yen for being alone, have no labor problem. Even in termite metropolises with several million inhabitants there is work for everyone.

ALL EXCEPT ONE OF THE 1,997 KNOWN species of termites have castes with the members of each caste responsible for a particular kind of employment. Except for dry wood termites there are usually 3 castes: Workers, whose job it is to build the termite cities, to

gather food, store away eggs, to massage the queen, and to feed each other and everyone else; soldiers, who are equipped with special jaws, or with a poison gas apparatus to defend the termite colony; and the kings and queens whose job it is to be fertile and multiply.



TERMITES

A termite colony often contains, besides termites, a horde of beetles and other bugs that are known as termitophiles, termite lovers etymologically, whose function is not known precisely, but which are generally regarded to be related to termites in the same way dogs, cats, sheep, goats, horses, and other domesticated animals are related to human beings.

Citizenship in a termite colony is evidenced by a characteristic termite odor so that anyone with the home smell may travel freely through the tunnels, corridors, and cells of the termite city. The moment a strange smelling visitor puts in an odor, however, the termites who are blind, sound the alarm by shaking their bodies convulsively and smacking their heads against the walls and floors of their tunnels and cells or by touching each other with their antennae. These alarms become a call to arms to the soldiers. They advance in battle order, squirting their poison gas, if they are tropical termites with a chemical warfare service, or displaying their mandibles and blocking lines of attack with their long armored heads if they are termites that are only equipped with infantry.

Hereditary enemy of the termite is the ant, though many birds, beetles, insects, ant-eaters, and other fauna, including men, attack the termite. Termite armies, however, are really no match in battle for anything much larger than an ant.

BIOLOGISTS SAY TERMITES HAVE A CRYPTOBiotic instinct. They shun the light of day and the eyes of the outside world. Instead they live in burrows in the ground, in cartons or hives that they build themselves, or in tunnels and galleries they engineer out of trees and lumber in buildings.

In the construction of the catacombs in which the wood inhabiting termites live, the outer shell of the timber is never destroyed and rarely pierced. A termite-ridden structure, no matter how thoroughly undermined, seldom falls of its weight. It remains intact until some outside event destroys it. A termite-infested floor in an uninhabited house may appear safe and normal, and if no one ever walks on it, or if unusually heavy furniture is not placed on it, it will stand up and look sound. Step on it, however, or move a piano in on it, or be unfortunate enough to undergo an earthquake and it may collapse. Fortunately such collapses on account of termites are very rare in this country.

So well do termites hide themselves inside their termite cities that frequently they carry on their occupations unbeknownst to anyone. To thrive, even to live, subterranean

termites need the dark and the damp. Deprive them of the dark and they are discomfited; deprive them of moisture and they die.

THERE IS A MOMENT IN SOME TERMITES' lives, however, when this instinctive craving for the dark and dank is replaced by an equally powerful compulsion to seek the light.

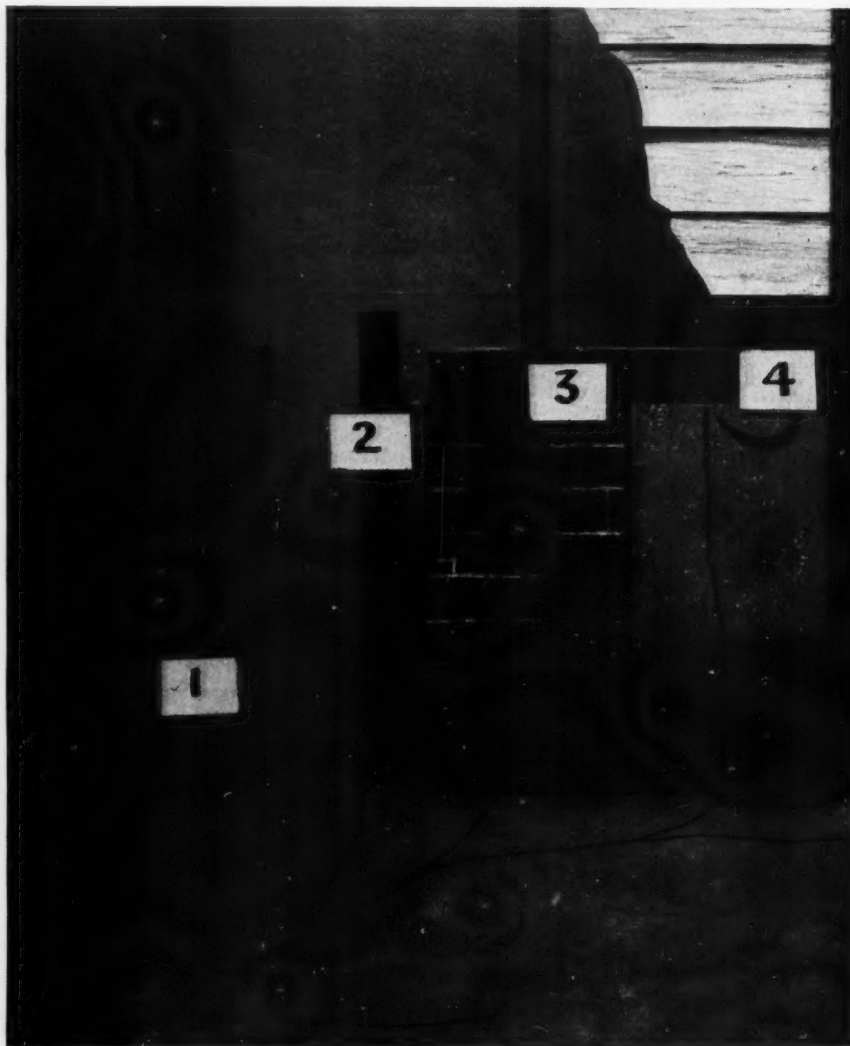
Periodically a swarming expedition made up of winged male and female reproductives sets forth from a termite city. They are the termite colonizers, and during the brief period of swarming they forswear the traditional damp night of their termite city and

issue into the world of light in search of new sites for termite colonies.

In preparation for the swarming, worker termites cut a hole (which they later close up) in the walls of the termite city, and then at a moment appointed by circumstances still unknown to scientists a swarm of termite reproductives emerges in a buzzing cloud.

While the termites are swarming they are a prey to birds and insects, but those that survive drop out of the swarm, pair by pair, a queen followed by a king, and stake out a termite homestead in a tiny aperture in the bark of a tree, in a decaying log, in a crack of wood, or in the ground depending upon

THIS SHOWS how subterranean termites get into houses: (1) They excavate galleries in wood which is in contact with the ground. (2) They extend tunnels along unprotected pipes coming from the ground. (3) They make their way through crevices in defective mortar, or (4) they build shelter tubes from wood and soil across surfaces that aren't earth or wood.



the variety of the termite and the environment it prefers.

At the end of the swarming flight the termite king and queen shed their wings and go about the work of building a colony with the same democratic lust for work that characterizes all early settlers. The king and queen together in the early stages of the termite colony get their own food, build their own home, and care for their own young. Not until the colony is well established and there are workers and soldiers enough to carry on, do the king and queen assert their royal prerogative to retire to the high task of race perpetuation.

Of the 1,997 or so species of termites known to inhabit the world there are 58 species colonizing actively in the United States. They are found in all the 48 States but they do most damage in the Southern, Central, and Pacific States. How much damage they do is not known, for frequently their presence in buildings is not suspected. Often, too, damage that has been done by termites is attributed to other causes. More often than not, however, damage due to rotting wood is wrongly assigned to innocent termites. Estimates of termite damage at best are guesses. For what they are worth guesses range from several million to 50 million dollars a year.

TERMITES USUALLY MAKE THEIR PRESENCE known to householders when, either in the spring or fall, a swarm of the winged colonists emerges looking for a new termite frontier. Frequently householders apply a broom to these winged termites in the hope that killing them and sweeping them out of the house will end the termite invasion. Actually it is not these termites which cause the damage. The burrowers that undermine a building, or destroy books, or eat up clothes, are wingless, cream-colored, soft-bodied insects with 6 legs.

One clue to the termite's presence in a house is a termite tunnel, an earthenlike tube extending from the ground over stone, or pipes, or metal, or through hollow masonry to wood surfaces.

Just how far advanced termite destruction has gone in a house can't be ascertained by casual observation, but if books are found eaten, or floors soften, or wainscoting yields to a push against it, or wooden posts and pillars sound hollow when knocked, or if presumably solid wood offers little resistance to an ice pick, then very likely termites have worked their way at least that far.

TERMITE CONTROL, LIKE THE CONTROL OF most things, has two phases: preventive measures and remedial measures. Since people are usually more concerned about the actual presence of termites than about their potential presence, take the after-the-horse-is-stolen measures first.

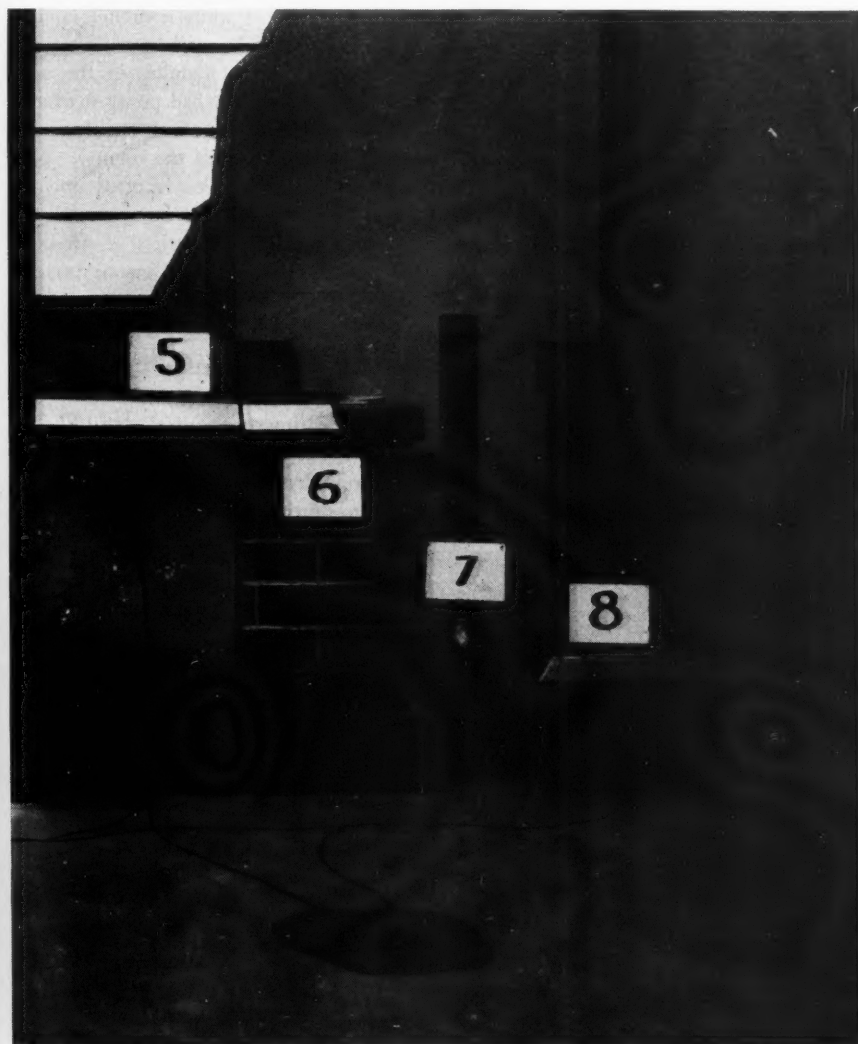
To live, termites need cellulose and water. They find the cellulose in the wood structure of houses, in paper, in books, clothing, and the other paraphernalia of a house. Chief sources of water are leaking pipes, the sweat which accumulates in unventilated basements, and, most important, the earth.

Cut off the termite's water supply and the termites quickly die. A first measure in termite elimination, then, is to examine the house for leaking drains and pipes, and to repair them. Where the source of the termite water supply is sweat on walls or ceilings, a method must be found to ventilate the air spaces in which the sweating occurs.

In most cases, however, termites transport their own water from the ground through the little tunnels they build around pipes or across slabs of masonry. Punitive expeditions against termites in such cases call for a series of measures: First the repair or replacement of beams, joists, and boards that have been attacked by termites. In cases where these timbers come within 18 inches of the ground experts also urge householders to use timbers that have been impregnated

[Concluded on page 15]

THIS SHOWS how subterranean termites can be kept out of homes: (5) Metallic shields embedded in concrete walls. (6) Brick walls can be capped with mortar and a metal shield. (7) Pipes can be ringed with metal shields. (8) Timber can be insulated from the ground with concrete and protected by metal shields.



So You're Going To Buy an Electric Washing Machine?

With no quality standards to guide your choice, these tips on machine construction and operation, garnered from Bureau of Home Economics' experts, can help to steer you to a good buy

UNTIL SCIENCE walked into the home and put electricity to work for the family, wash day was probably the bluest-lettered day of all. Now, in this push-button, flip-a-switch age, homemakers can walk up to Monday and look it cheerfully in the eye because electric washing machines have banished much of the drudgery and toil involved in keeping the family spick and span.

That, of course, is on the supposition that they have the wherewithal to swing the capital expenditure for a washing machine in the first place. When a machine may be

priced anywhere from \$39 to 2 or 3 times that much, many families are as free to consider buying a washing machine as a trip around the world. Too often other household needs—foods, shelter, heat, clothing—must take precedence over the capital purchase of an automatic washer.

Two Government bureaus made an estimate of the number of motor-driven (both electric and gasoline) washing machines in the Nation's homes in 1935-36 and discovered that we are still not a country with a washer in every kitchen. Results of the

study so far completed—covering small cities, villages, and farms—show that low-income families, for the most part, rely on washboard and tub to get the family laundry done.

About 70 out of every 100 nonrelief families in small cities in the north central plains and mountains, and Pacific areas of the country possessed motor-driven washing machines. In cities in the southeast, contrariwise, only about 2 white nonrelief families in every 100 owned a washer, while none of the nonrelief Negro families in the same area reported that they had power machines.

In villages, the picture was roughly similar for the same sections of the country. New England village families reported only 54 out of every 100 families owning machines.

Farm areas, where electric lines are often few and far between, made an unexpectedly good showing, with the exception of the

IS the machine well constructed? Observe carefully each part and feature of a washer before you buy. Look for deeply curved legs, rubber interlining where metal touches metal, wheels that lock in place. Sharp edges, exposed rivets, or screws may mean future difficulties. Machines that can be adjusted for different working heights are an extra convenience.

CAN the machine be cleaned easily? Most finishes, with the exception of copper-nickel, are easy to clean. One efficiency note to remember is that the washing mechanism should be removable to facilitate cleaning. The mechanism that comes off without need of pliers or screw driver is the simplest arrangement. Remember to ask for complete directions for cleaning.



WASHING MACHINES



South where only rarely did a nonrelief farm family say it owned a washer. In some States—California, Illinois, and Iowa—65 farm families out of every 100 were found to own either gasoline or electric washing machines, and those owning hand machines brought total ownership up to 84. With the exception of the southeast, in no section did washing-machine ownership fall below 60 percent of the nonrelief, farm families covered.

NO QUALITY STANDARDS FOR ANY TYPE OF washing machine have been evolved by any Government agency, but experts in the Department of Agriculture and in the laboratories of some experiment stations have investigated beyond the price tags of all types of machines and listed a number of simple buying tips for the prospective purchaser of electrical machines.

First, they say, look to the size of your family wash before you decide on the size of your washer. A good machine should tell on the label the number of pounds of dry clothes it can handle at one time. Insist on this information; capacity of washers measured simply by the number of sheets it will hold, or by some similar standard, is apt to be misleading.

For the average-size family, a tub with a capacity of 7 or 8 pounds will suffice. If your laundry runs large every week, a machine holding at least 9 pounds of clothing would be more appropriate. Small machines—some of them hardly more than

table models—are useful for doing small pieces; they are inefficient if you do your entire laundry at home.

MECHANICAL HEART OF THE WASHING MACHINE is the washing unit. There are 3 basic types: Agitator, vacuum cup, and cylinder. The agitator type contains a series of metal fins attached to a revolving axis. There are a number of variations. Some have the fins straight up and down; in some, they are suspended from the top of the axis; in some, they are spiral-shaped. Usually, the agitator revolves back and forth, driving the water through the clothing, and keeping the clothes in motion.

The vacuum cup type consists of 3 or 4 bell-shaped cups which clean the clothes by moving up and down as well as in a circular direction.

In the cylinder type of washer clothes are packed within the perforated cylinder which usually moves back and forth in the tub, driving the water through the holes, at the same time that it keeps the clothes in motion.

BUREAU OF HOME ECONOMICS RESEARCHERS point out that there is no cut and dried rule to follow in deciding on which type of washer you want. Two washers with exactly the same type of mechanism may be totally different in results.

A smart rule is to ask to see the washers in action with a tub full of clothes. The machine that churns and drives the water through the fabrics may shorten your work-

ing day; but it may also be harder on the clothes. A machine with gentler action, according to the Bureau of Home Economics, will take longer to finish the job but will give less rough treatment to the fabrics.

Economy arguments about the faster machine saving on electric costs are questionable. The ordinary machine uses so little current that a few minutes more or less are nothing to worry about. Bureau of Home Economics experts estimate that the average machine uses about 250 watts of electricity. If your electric cost is 4 cents per kilowatt-hour, it would cost you only 9 cents a month to use your machine an average of 2 hours per week. Costs may vary a few pennies one way or the other with different machines and in different localities. But the difference is so small as to make the saving of any sizeable sum out of the question.

WASHING MACHINES ARE MADE WITH A number of different types of materials, chiefly porcelain-enamel, aluminum, monel metal, stainless steel, and nickled-copper.

Moderate in price, easy to clean, porcelain-enamel tanks are made by applying several coats of vitreous porcelain-enamel to sheet steel. At least 3 coats of the enamel should be sprayed on the tub; additional coats improve its appearance but also make the finish more brittle. Enamel finishes are apt to crack or chip in time. With ordinary care, good enamel should not do this, but it is wise to ask for a manufacturer's guarantee when you buy.

HOW safe is the machine to operate? Look for an emergency release on the wringer, that's easy to reach and works instantaneously. The release should also automatically cut the current. Put a wooden platform or rubber mat beneath the machine and operator to guard against shock hazards. Don't touch controls with wet hands.

HOW simple is operation of the machine? A bad point on the model below is a control switch out of easy reach; it should be at the top of the machine. Good points are the automatic drain, and the sturdily constructed wringer that can be swung in any direction without wobbling or losing balance.



Aluminum—either drawn or cast—overcomes this shortcoming of enamel, but its liability is the difficulty of keeping it clean and free from stains. The smoother the surface of the aluminum, the easier it will be to clean.

Copper-nickel tanks are strong, durable, and low in cost, but require persistent vigilance to keep clean.

Monel metal is an alloy of nickel and copper, and it is not to be confused with the

copper-nickel tanks. It is strong, wears well, is fairly easy to clean, but usually has a price tag above that of the other types of machines.

Stainless steel ranks with monel metal as the aristocrat for washing tubs, but its high price puts it out of reach of ordinary budgets.

Axiomatic among washing-machine buyers should be this rule: A washer is no better than its frame. First step in estimating the strength of the frame is to examine its legs.

Strongest legs are of cast or pressed steel, deeply curved, and even completely tubular at the bottom. Legs with only shallow channeling may bend after a long period of time unless very well braced to the frame. Casters (wheels) of the washer should be made of rubber to muffle noise, should move easily in all directions, and should lock in place to prevent vibration when the machine is operating. The legs should also be adjustable to different heights. That makes it simple to level off the machine on an uneven floor, and to adjust its height to the best working position.

BODY OF THE WASHER SHOULD BE OF FIRM, rigid construction. Rubber interlining at points where metal touches metal makes for quiet operation. Worst failing of any tub is a sharp edge or point to catch clothing and fingers. All edges should be rounded off, and screws and rivets smoothed and concealed, if possible. Well constructed machines have the fewest possible number of screws or rivet heads on the inside of the machine.

The washing mechanism itself should be easily removable without the need of pliers or screw driver so that it can be cleaned and dried after each time it is used.

Top of the tub should be lined with a small "shelf," slightly inclined inward, to control splashing. At the same time the opening of the tub should be large enough to facilitate putting in and removing clothes.

Cover of the machine may be removable or on hinges. On hinges, it becomes a handy shelf when opened and eliminates the task of taking off the cover and putting it on again each time clothing is added.

No matter what type it is, the cover should be heavy enough to avoid vibration when the machine is in operation, and should have a rubber lining around the rim. Some researchers have found that a clamp to hold the cover down when closed is an extra advantage.

A WRINGER HAS TO BE A LOT OF THINGS, BUT most of all it must be safe. That requires a safety release or button, easily reached, and with instant action behind it. It takes only a second for a severe injury to happen when a finger or hand gets caught in the rollers. First safety rule is to get a wringer with a release that works easily. The release should not only spread the rolls, it should also automatically cut the power when touched.

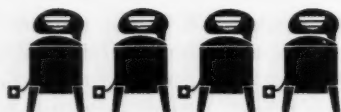
Observe the rolls of the wringer carefully. These should be easily accessible for cleaning and wiping, with all gears enclosed and no loose joints where oil might drop on

THEY HAVE MOTOR DRIVEN WASHING MACHINES

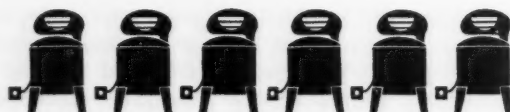
Out of every 10 nonrelief families in small cities in the North Central area, these reported (1935-36) they owned motor driven machines *

FAMILY INCOME

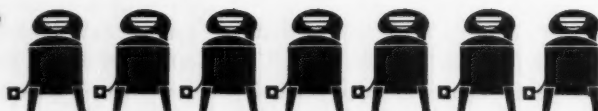
Less than \$500



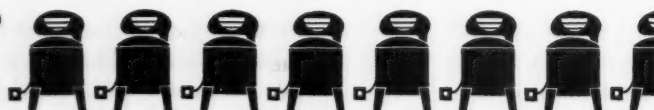
\$500 to \$1,000



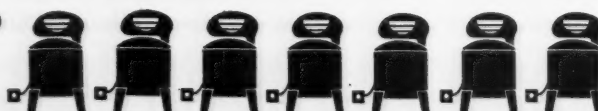
\$1,000 to \$1,500



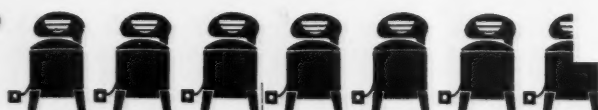
\$1,500 to \$2,000



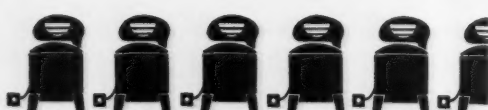
\$2,000 to \$3,000



\$3,000 to \$5,000



\$5,000 or over



*Many families now at low income levels once knew better days. The record does not show when these machines were purchased. Probably many were acquired by the very low income families when times were not so hard.

clothes. As to choosing between rolls of hard rubber and rolls of soft rubber, you will have to make your own decision. No research so far has conclusively proved the advantage of one over the other. Hard rolls may injure buttons or hooks, but they last longer. Soft rolls are said to adjust more easily to various thicknesses of material, to be easy on buttons, but to wear out more rapidly. Some manufacturers compromise with either two semisoft rolls, or one hard roll and one soft one.

ASK TO SEE THE WRINGER IN ACTION BEFORE you buy. Then you can tell for yourself how efficient is the safety release, and whether or not the drain board reverses itself automatically, as it should. Swing the wringer into various positions to be sure it doesn't wobble or lose balance when set away from the tub.

For budgets that allow it, the extra expenditure for a "spinner basket" in place of a wringer is a worthwhile investment. These devices make clothes lose much of their moisture by whirling them. When the moisture has spun through the extractor, the clothing is ready for the line, and, in some cases, can be ironed damp-dry. Spinner driers don't tear fabrics or injure buttons or put heavy creases in the clothes. They do away with the risk, present with the clothes wringer, of a mashed hand.

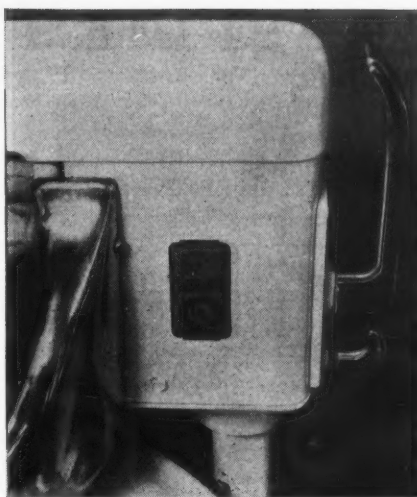
If you can afford one of these, be sure all the rotating parts are enclosed. A safety feature to look for, in a high-speed drier, is a cover that can't possibly be removed until the spinner has stopped revolving. Make sure the spinner basket is removable so that it can be cleaned and dried after each wash.

AN AUTOMATIC PUMP ON THE MACHINES with a permanent-attached hose which may be hooked over the rim of the sink or laundry tub for draining, is an added convenience.

Another type of drain fastens to the faucet with one end in the tub and the other in the sink. When the faucet is turned on, the resulting suction forces the water out of the tub. This may be purchased separately but does not come with the machine.

Most inefficient type of drain is the drain cock at the bottom of the tub which must be opened or shut as needed. Not only is this inconvenient to get at, but it also is a potential source of leakage.

HOUSEWIVES AREN'T USUALLY ELECTRICAL engineers. Choosing an efficient motor, in the absence of quality standards, is naturally, therefore, a difficult task. To get a motor that will work efficiently and won't need replacement after a few months of use, ask



THIS LABEL on a washing machine and other electrical appliances is approved by the Bureau of Home Economics as an indication of safety. It means the machine meets safety standards of Underwriters Laboratories, Inc., a non-profit organization that makes safety tests of electrical appliances on manufacturers' requests. This label does not indicate the quality of the machine.

for a guarantee against a defective motor or defective wiring in the machine. Be sure the label attached to the machine gives the name of the manufacturer, the serial number of the machine, whether it is for alternating or direct current, its voltage and wattage rating, and, if for alternating current, the number of alternating cycles it is intended for. Check with your local power company to be sure the motor meets the needs of your household current.

Power needed for a washing machine is one-quarter horsepower. The motor should be well-incased in the machine to protect it against dust and grime. And it should be self-oiling.

WIRING SHOULD BE INSULATED WITH HEAVY, flexible, rubber tubing. So far as possible the wiring should be built into the machine, not attached to the exterior surface. At no point should it be exposed to the metal parts of the machine, and there should be plenty of free cable to reach a convenient plug outlet. Once a year have the wiring checked by an electrician and replace any cable which has bad insulation.

A wooden platform or rubber mat large enough to hold both machine and operator is the best check against electric shock caused by wet hands coming in contact with exposed current. Don't stand on a wet surface when operating the machine.

THERE IS A SAFETY STANDARD WHICH YOU can rely on, and which is approved by the

Bureau of Home Economics. Here is what the Bureau says: "All electrical appliances should be tested for safety. The best check you can make on this point is to look for the Underwriters Laboratories, Inc., approval. This nonprofit organization makes tests for safety of electrical appliances on request from a manufacturing company. It is maintained for service to examine and test equipment for hazards against shock and fire, and does not rate one brand or model against another.

"If this laboratory regards an appliance as safe it will either label it or list it in an approved list of appliances."

When you buy a washer, look for the approval label of the organization or ask the salesman for a list of the washers meeting the standard. If he does not have the list, he can get it for you.

All switches and controls of the machine should be within easy reach, not hidden away at the bottom of the tub, making it necessary to stoop or bend over every time you want to turn the power on or off.

ASK FOR COMPLETE INSTRUCTIONS TO CARE for the machine, and follow them to the letter. Wash, completely dry, and air the machine after each use. Any removable parts—such as the agitator—should be taken out and thoroughly wiped, and the wringer should be released before cleaning. Lubricate the machine only as the manufacturer advises, but always be sure the connecting plug is out of the socket before you do this. Stains may be removed with a fine scouring agent, hot vinegar, or a solution of soapsuds and ammonia. Finally, don't overwork your machine. Too many clothes in the wringer or in the tub harms the machine. Likewise, filling the machine over the water line reduces its efficiency and results in splashing.

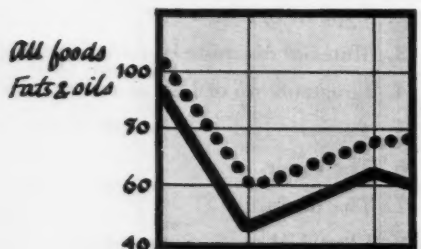
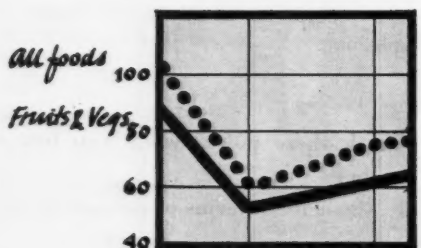
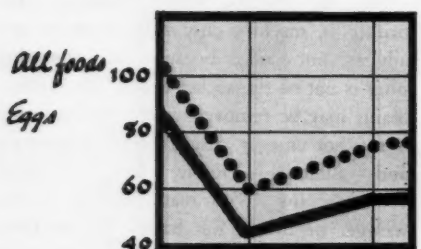
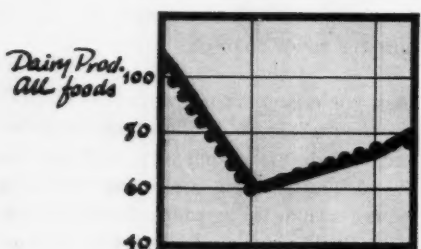
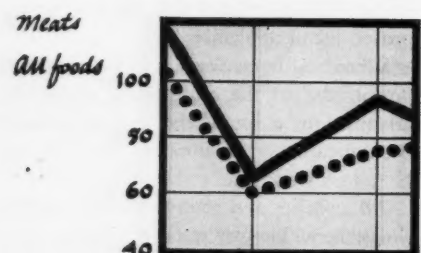
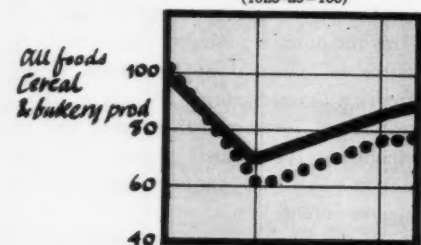
Check these points when you buy a washer:

1. Capacity in terms of pounds of dry clothes.
2. Type of agitator.
3. Material machine is made from.
4. Construction of legs and tub.
5. The wringer.
6. The cover.
7. The drain.
8. Electrical equipment.
9. Protection against shock hazards.

14 YOUR FOOD SUPPLIES AND COSTS

A PERSPECTIVE

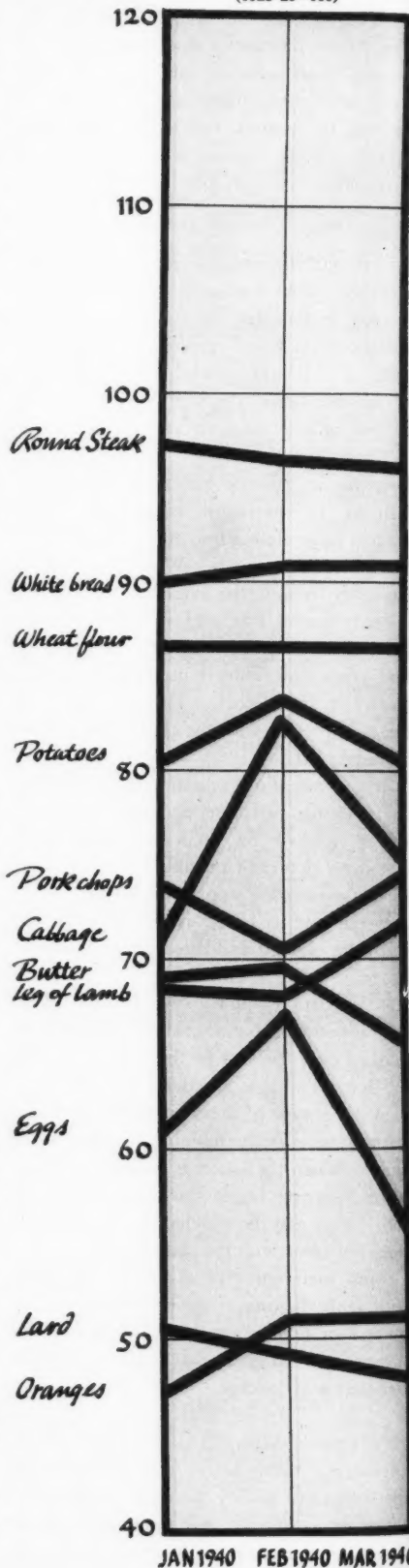
(1923-25=100)



MAR 15 1929 MAR 15 1933 MAR 14 1939 MAR 12 1940

A CLOSE-UP

(1923-25=100)



JAN 1940 FEB 1940 MAR 1940

FOOD COSTS. Price reductions in most major food items between February and March carried retail food costs in general back to the level which prevailed in mid-January prior to the increase due to unusually cold weather. Notwithstanding this decline, retail food costs were slightly higher (1 percent) than last March. Except for 1939, however, they were the lowest for any March since 1934.

Decrease in food costs was most pronounced in eggs and butter, reflecting seasonal increases in supplies. The only major food group which advanced in cost during the period was meats. This increase was due to higher prices for poultry, lamb, and fresh pork which offset decreases in beef and cured pork. Compared with last March, all major food groups except meats and fats and oils were higher.

FOOD SUPPLIES. Unfavorable weather conditions during the first third of 1940 have hampered vegetable production. As a result, it appears that supplies will be smaller than last spring and will move to market later than usual. This delay in marketings may result in an overlapping of marketings from several areas and the consequent piling up of supplies in late May or June. Tomato production in particular has been quite adversely affected by weather, and marketings in May are not expected to come up to 1939 levels.

STRAWBERRIES. Heaviest marketings generally come in late May or early June. Supplies this May are not expected to differ much from 1939.

CITRUS FRUITS. Summer oranges, which ordinarily are marketed from May through October, are expected to be slightly more plentiful than last year. Grapefruit supplies during the remainder of the spring and summer are expected to be below 1939 levels.

EGGS. Marketings in May are not expected to equal April levels, when they ordinarily are at their high point, but they are expected to be larger than last May.

MEATS. Pork, lamb and better grade beef most likely will be more plentiful than last May, but smaller supplies of lower grade beef are in prospect.

CANTALOUPS. Supplies in May come primarily from California. May be smaller than last year due to reduction in acreage.

HAVE YOU TERMITES IN YOUR HOME?

[Concluded from page 9]

with termite-resisting chemicals by a standardized pressure process. The same strategy calls for the creation of mechanical or chemical barriers to prevent the passage of termites from the ground into the building. Chemical measures against termites, however, are impermanent.

BEFORE ANY EXPENSIVE ALTERATIONS OR measures are undertaken, it should be determined whether or not termites are really responsible for the damage done. Specimens of the insects apparently responsible for the damage should be sent either to the State Agricultural agency or to the Federal Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture. At the same time this is done, householders are well advised to request literature on termite control.

Once the termite identity has been established, if the invasion is not too far advanced householders themselves can often take the termite situation in hand themselves.

When householders feel they must have help, however, the United States Department of Agriculture says, any reliable building contractor who knows termite habits and the principles of termite control can repair termite damage and prevent further ravages by them.

WHERE THERE IS TERMITE INFESTATION A survey should be made to see if—

(1) Wooden floors, joists, or any other wood in the building are in contact with the earth.

(2) Debris has accumulated under porches, or in basements, or against the side of the house.

(3) Termites are penetrating through masonry piers, or defective mortar work.

(4) Termite tubes have been built over pipes, or masonry slabs, or concrete.

Where there is debris it should be removed and burned. Where wooden floors are infested because of contact with the ground, they should be torn up and removed. In replacing these floors, the ground underneath should be excavated to a depth sufficient to provide for an impenetrable layer of concrete. There should be at least 2 inches of concrete between the wooden screeds or sleepers and the ground. Sleepers should be impregnated with a standard preservative. They should not be buried in the concrete, instead they should be set in grooves or enclosed by metal fasteners. Information on satisfactory wood preservatives may be obtained by writing to the Superintendent of

Documents, Washington, D. C., and requesting Federal Specification TTW571A. It costs 5 cents in cash.

Where uprights, or joists, or door jambs are replaced they should be provided with cast iron or concrete bases.

Where the termites have entered through hollow concrete piers or through loose plaster or cement, the plaster or cement must be replaced and the hollow piers capped with new cement, or with metal shields. If it is impractical to cap the concrete piers, chemical warfare can be used against termites for temporary relief. In this case, bore holes in the pier and pour in a chemical liquid called orthodichlorobenzene (it can be purchased from a manufacturing or wholesale chemist) allowing 1 gallon for each 10 feet of hollow masonry.

Termite shields should be placed on walls underneath closed-in porches, sun parlors, steps, and in places that are so walled up that inspection is not possible, provided of course the cost of installing the shields is not exorbitant. These metal plates made of noncorroding metal, usually copper, project 2 inches beyond the posts and then turn down 2 or more inches at an angle of 45 degrees. Similar shields should be placed 18 inches above the ground on all inside pipes which run into the earth in partially excavated areas. Where pipes penetrate floors or masonry walls, they should be well sealed with coal-tar pitch. These shields prevent termites from extending tunnels from the ground to the woodwork in the building.

Trellises and fences should be kept at least 2 inches away from the building and shrubs should stand far enough away from the building to permit easy inspection of the walls.

Where these measures are too expensive, or impracticable, a spot of chemical defense may be tried.

ONE SATISFACTORY METHOD OF ATTACKING termites chemically consists of digging a trench 30 inches deep and 12 inches wide around the infested foundation walls and piers. All wood debris should be removed during the digging and termite shelter tubes, if there are any, should be broken up. The trench should then be saturated with full strength orthodichlorobenzene, 1 gallon for each 10 feet. After this treatment has been applied, the soil should be replaced to within 3 inches of the surface and the treatment repeated. Orthodichlorobenzene irritates the skin when you touch it, and it is painful if it gets in the eyes. It also generates nauseating fumes if you are exposed to them too long

within a confined space. Almost equally effective, and somewhat easier to use, is a mixture of coal-tar creosote and kerosene; 1 part creosote to 3 parts kerosene. Since this chemical is less penetrating than orthodichlorobenzene, twice as much of it must be used, that is 4 gallons for each 10 linear feet. When the trench saturated with the creosote and kerosene mixture is refilled the earth should be stirred up so the liquid will permeate the soil. Both chemicals are poisonous to plants.

All these measures are for people who think about termites after the damage is done. Consumers who are building or who intend to build homes can outwit termites by taking a few precautions at the time the house is built.

INSURANCE AGAINST TERMITES AT VERY small cost can be obtained if the following building precautions are taken:

(1) Treat all structural wood which touches the earth or comes within 18 inches of it with a termite repelling preservative.

(2) Make the lower 5 or 6 inches of door casings in basement rooms in the form of a solid concrete block rising from and continuous with the floor.

(3) Lay masonry foundations and footings in cement mortar, with all joinings filled and pointed.

(4) Cap all masonry piers, whether solid or hollow with 2 inches of reinforced cement masonry, or with mortar and slate, or with noncorroding metal.

(5) Provide the top of all masonry unit foundations, pilloirs, supports, and pipes with metal termite shields. This need not apply to solid concrete walls surrounding full excavations, unless they are next to closed-in areas which cannot be inspected regularly.

(6) Where part of the earth under the house (under sun parlors and porches) is unexcavated, clear the earth away so that none of it comes within 18 inches of wood, and see to it that this space is ventilated. Here experts urge householders to plan openings to enable them to get inside the walls and look around occasionally.

Communities can take effective action against termites by incorporating anti-termite provisions into their building codes. Such regulations require all new buildings in a community to include precautions against termites. Copies of the recommendations the Department of Agriculture has worked out may be obtained free by writing to the Federal Bureau of Entomology and Plant Quarantine, Washington, D. C. Ask for Brief E 338.



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